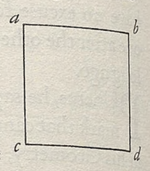
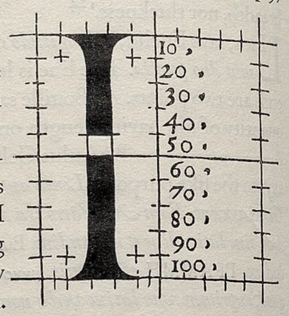
LInea recta, says Euclid, *est ab vno puncto ad alium breuissima extensio, in extremitates suas ea recipiens.* The straight line is the shortest distance from one point to another—that is, between two points, including them both at its ends. When one straight line stands upon another straight line, and the two angles on either side are equal to each other, and right angles, the said line standing upon the other is called a perpendicular line, because it descends straight (*pend droitte*) upon the other horizontal line. With these two lines—the straight line & the perpendicular—we will make a figure, which is called in Euclid *superficies plana, quæ est ab vna linea ad aliam breuissima extensio in extremitates suas ea recipiens.* We can say in French, *superfice,** or *plaine,* &, as Bouille says, it is the second & middle quantity, having length & breadth, but no thickness, as in the next square, thus marked—*a, b, c, d*—of which the length is measured by the line *ac,* & the breadth by the line *ab.*

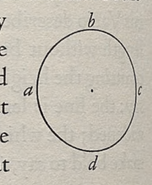


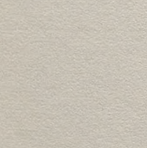
THis plane, having its four lines and angles equal, is a square (*quarreau*), but in my style I shall call it *quarre,*† which, for the making of our letters, I divide by eleven straight horizontal lines & other eleven straight perpendicular lines, so that the large square will contain a hundred small squares, which I shall call 'units' (*corps*), because the length of the I, which will be of the same proportions as all the other letters, will be contained in one of these small squares, as is shown in the following figure:



I Have left in the middle of this figure a small white square which is the unit of the said letter I, & which I shall call the unit of each letter, saying 'this letter' or 'that letter' has so many units of height & so many of breadth.

THere are two kinds of lines—a straight line & a curved line. Of the straight line we have already written, & we may say again that the straight line is that which goes the shortest way from one point to another. The curved line, says Bouille, is two-fold, for there is a perfect curve [circle] & an imperfect one. The perfect circle is a circumference which returns to the same point at which it set out, like the circle *abcd,* which set out at *a* and returns to *a* at the end, and is called by Euclid, *Circulus, qui est figura plana, vna quidem linea contenta, quæ circunferentia vocatur, in cuius medio punctus est, a quo omnes lineæ rectæ et ad circunferentiam exeuntes sibi inuicem sunt æquales.* 'The imperfect curved line,' says Bouille, 'is a part of the perfect one, for it does not end at its point of beginning; and this line is called an *arc* [bow], because it resembles a bow—as the line *abc.*'





THree straight and equidistant lines, contained between three points, make a plane figure called triangular because it has three angles, equilateral or otherwise.* An isopleural triangle, says Bouille, is one which has three equal sides and is called a regular and perfect triangle—as *abc.*

OBserve that in this work I shall often speak of the Centric & Diametric line, & by this will be understood the line across the middle of the square in which will be designed all our Attic letters in their order. And the better to know and understand it, I have drawn it in the following form:

THere are several other kinds of angles and lines, of which I say nothing now, referring the earnest student to Euclid, and to the French Geometry of Messire Charles Bouille, wherein he seems to me to have magnified & gained immortality for his name as much as in all his other books and Latin works, which he has written most eruditely. We have never yet seen such another author in the French tongue. Would God that many another would do the like, not from contempt of the Hebrew, Greek, and Latin tongues, but to go forward more surely in their domestic course; that is to say, to write in French, like Frenchmen that we are.

IHold in great esteem Maistre Estienne de la Roche, called de Ville Franche, a native of Lyons on the Rhone, who has written and described for us in good French the whole art of Arithmetic. I see very few Greeks or Latins who write of it better, more truly, or more fully. I see

* *In modern French, 'superficie'; in English, 'plane.'*

† *Modern French, 'carreau' and 'carré.' It seems hardly worth while to attempt a distinction in translating, especially as Tory is inconsistent in his use of the words.*

* *This definition of a triangle leaves something to be desired, but it is as Tory wrote it: 'lignes . . . . equidistantes . . . . angles equilateraulx,' are his phrases.*

a=*Centric and Diametric line*

b=*Perpendicular*

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